

## WELDING PROCEDURE SPECIFICATION

**WPS-** 2010-11B **REV. NO.:** 0 **DATE:** 9/1/2004 \*\***APPLICABILITY**\*\*

WELDING PROCESS/ES GTAW- and GTAW- ASME: X AWS: X

SUPPORTING PO P-WS-195-2 OTHER:

JOINT This WPS shall be used in conjunction with the General Welding Standards (GWS) and Welding Fabrication Procedure (WFP) sections and criteria for joint details, repairs, NDE, inspection etc.

Weld Joint TypeButt/FilletClass:Full or Partial PenetrationSee GWS 1-06 for detailsPreparation:Thermal/Mechanical

Root Opening: Backing: With/Without

Backgrind root: Y Backing Mat.:

Bkgrd Method: GTAW Flux: N/A Backing Retainer: N/A

FILLER METALS: Class: EF5 and EF5

**A No:** 12 **SFA Class:** 5.23 **and** 5.23 **F No:** 6 **and** 6 **Size:** 1/8 1/8 1/8

 $\textbf{Insert:} \quad N \qquad \textbf{Insert Desc.:} \quad N/A \qquad \qquad \textbf{Weld Metal Thickness Range:}$ 

**Flux: Type:** NA **Size:** 0 **AWS:** 0.120 **thru** 99.999

Filler Metal Note: ASME: 0.062 thru 8.000

BASE MATERIAL P No. 11B Gr No. All to: P No. 11B Gr No. All

Spec. HY-100 Grade: All to: Spec. HY-100 Grade: All

**Pipe Dia Range:** Groove > 0

Thickness Range: Groove: AWS: 0.120 thru 99.999 ASME: 0.062 thru 8.000

**QUALIFIED POSITIONS** All All **Vertical Progression:** Up Preheat Min. Temp.: 70 **F GAS: Shielding:** Argon or Argon Interpass Max. Temp. % % 500 **F Gas Composition:** 100 % **Preheat Maintinance:** 70 **F** Gas Flow Rate cfh 20 **to** 35 100 % Backing Gas/Comp: Argon PWHT: Time @ F Temp. 5 0 **Backing Gas Flow cfh** 3 **to** 0 **F** Trailing Gas/Comp: N/A % Temp. Range: 0 **F** to

PREPARED BY Kelly Bingham DATE: 3/30/2004

Signature on file at FWO-DECS

**APPROVED BY** Tobin Oruch **DATE:** 9/1/2004

Signature on file at FWO-DECS

Note:For SC/SS/ML-1/ML-2 work, this WPS requires independent review.

WPS NO: 2010-11B

## WELDING CHARACTERISTICS:

Current: DCEN and DCEN Tungsten type: EWTH-2 Transfer Mode: N/A

Ranges: Amps 125 to 225 Pulsing Cycle: 0 to 0

Volts 12 to 18 Background Current: 0

Fuel Gas: N/A Flame: N/A Braze temp. F 0 to 0

WELDING TECHNIQUE: For cleaning, grinding, and inspection criteria refer to Volume 2, Welding

**Fabrication Procedures** 

**Technique:** Manual **Cleaning Method:** Wire Brush, File, Grind

Single Pass of Multi Pass: M tringer or Weave bead (S/W): S Oscillation: N

GMAW Gun Angle  $^{\circ}$ : 0 to 0 Forehand or Backhand for GMAW (F/B): N/A

Maximum K/J Heat Input Travel speed/ipm: 4 - 8 Gas Cup Size: #3 -7

## PROCEDURE QUALIFIED FOR:

Charpy "V" Notch: Y Nil-Ductil Transition Temperature: N Dynamic Tear: N

**Comments:** 

REM.

Weld Layer	Manual Process	Filler Metals	Size	Amp Range		Volt Range		Travel ipm		Nozzel Angle	Other
1	<b>GTAW-</b>	EF5	1/8	125	225	12	18	4	8	0	
2	GTAW-	EF5	1/8	125	225	12	18	4	8	0	
3			1/8							ŭ	
4			1/8								
5											
6											
7											
8											

\* Weld layers are representative only - actual number of passes and layer sequence may vary due to variations in joint design, thickness and fitup.